

SUPPORT FOR AMENDMENTS

Claims 17 and 18 have been newly added. Support can be found in the specification at page 7, line 15 through page 16, line 11.

No new matter has been added.

REMARKS/ARGUMENTS

The present claims relate to methods for printing a sheetlike or three-dimensional substrate by the ink jet process comprising utilizing a thermally crosslinkable, aqueous recording fluid containing random polyurethane copolymers and one or more melamine derivatives as crosslinkers in a printing process.

The rejection of Claims 1-16 under 35 U.S.C. § 103(a) in view of U.S. Patent 6,136,890 (**Carlson et al.**) in view of U.S. Patent 5,334,690 (**Schafheutle et al.**) is respectfully traversed. The cited references disclose ink jet containing polyurethane dispersants and polyurethane dispersions respectively. However, the cited references do not disclose non-resin melamine derivatives that serve as thermal crosslinkers.

The Office concedes: “**Carlson et al.** differs from the claims of the present invention i[n] that the recording fluid comprises the melamine derivatives as a crosslinkers.” Indeed, this cited reference does not contain any disclosure of melamines. In addition, the cited reference does not teach the use of random polyurethane copolymers and one or more melamine derivatives as thermally crosslinking agents. Rather, the cited reference teaches the use of specific polyurethane dispersions.

The Office alleges: “It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the recording composition of **Carlson et al.** by the aforementioned teaching of **Schafheutle et al.** in order to have a high quality printed image.”

However, **Schafheutle et al.** states:

The crosslinking agents customary in the paint industry, such as, for example, water-soluble or -emulsifiable melamine or benzoguanine resins, water-emulsifiable polyisocyanates or water-emulsifiable prepolymers having terminal isocyanate groups, water-soluble or -dispersible polyaziridines and blocked polyisocyanates, can be added during formulation of water-dilutable paints using the polyurethane dispersions according to the invention.

See Col 7, lines 14-22 of **Schafheutle et al.** This cited reference discloses water-soluble or -emulsifiable melamine *resins*, which cannot further react with, *inter alia*, the polyurethanes discloses in this reference. Indeed, a person of ordinary skill in the art is aware that these reacted melamine resins *cannot* act as thermal crosslinking agents. In contrast, the one or more non-resin melamine derivatives used in the presently claimed methods can act as thermal crosslinking agents. Applicants note that the melamine derivatives of the presently claimed methods do react in the dispersing binder system:

The areas printed by the ink jet process are customarily treated with heat in order that the prints may be fixed and the dispersing binder system may be crosslinked.

See paragraph [0134] of U.S. Patent Application Publication 2006/0119679. In addition, Applicants direct the Examiner's attention to dependent Claims 17 and 18, which define R¹ and R² as hydrogen, R³ and R⁴ are CH₂-OH and m is an integer from 1 to 5. Thus, these melamine derivatives are not resins and can react with the polyurethanes in the aqueous recording fluids used in the presently claimed methods.

Based on the above arguments, the cited references would not suggest to one of ordinary skill in the art to include one or more non-resin melamine derivatives in aqueous recording fluids containing random polyurethane copolymers during methods for printing a sheetlike or three-dimensional substrate by the ink jet process. Thus, there is no motivation to incorporate the melamine derivatives of **Schafheutle et al.** in the compositions **Carlson et**

al. to derive methods for printing a sheetlike or three-dimensional substrate by the ink jet process. Therefore, neither **Carlson et al.** nor **Schafheutle et al.**, alone or in combination, disclose the presently claimed methods.

Accordingly, the rejection should be withdrawn.

Applicants submit that the application is now in condition for allowance, and early notification of such action is earnestly solicited.

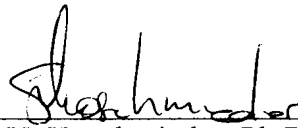
Respectfully submitted,

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